ACCELERATOR NOMENCLATURE

F. T. Cole and R. C. Juergens

April 24, 1970

Each of the Laboratory sections responsible for technical component design, in response to their own needs, has attempted to devise a nomenclature, or component identification system. This is an attempt to draw these efforts together, with the help of the Electrical Standards Committee and other representatives of these sections, and to produce a component identification numbering system suitable for use throughout the whole accelerator complex.

The following identification symbol system has evolved. It has the form

$$XX_n^x n - XX_n^x - nn$$
,

where X is an alphabetical and n is a numerical character; $\frac{x}{n}$ is either an alphabetical or numeric character.

The first field

XX^x_n is an area designator;

the second field

XX is a device designator, (see page 8)

and the third field

nn is an item designator.

We would emphasize that the combined area-device designator symbol is intended to be applied to a particular piece of equipment located in a particular place in the accelerator complex. It is not intended to be a serial number for a particular make or model of apparatus. Thus, if a device is moved to a different area (as defined in this document) its identification symbol would change. Replacement of

a device in an area would cause the replacement device to assume the identification symbol of its predecessor (if they are equivalent in intended function, etc.).

Cable Labels

It is planned that cable logs will be stored in the control computer memory. It is suggested that cables be labelled at each end with the device name and location of the other end of the cable.

Area Designator

The first letter will always be used to delineate the accelerator area or general area involved. Thus we will have

- B for Booster
- C for Central Laboratory
- E for Experimental Facility
- F for Farms
- I for Industrial Area
- L for Linac
- M for Main Accelerator
- P for Proton Beam Lines
- T for Beam Transfer
- U for Utilities
- X for Cross Gallery.

Succeeding alpha characters and the numeric character are used to complete the area designator with a mnemonic combination consistent with single use of a set of characters.

A list of the area identifiers in use to this time follows. It is, of course, intended that this listing is simply the beginning, to be added to as need arises. Prints of drawings showing the areas covered by the identifier are attached.

LINAC -AREA IDENTIFIERS (see drawing 0260-MC-4262)

LB	0	Beam-transport area from preaccelerator room to tank-1 area
LB	9	Beam-transport area from tank 9 to Booster
LE	0	Equipment bay (upper level) near preaccelerator room
LE	1	Equipment bay for tank 1
LE	2	Equipment bay for tank 2
•		
LE	9	Equipment bay for tank 9 at end of linac
LP	0	Preaccelerator A/C and pump room
LP	1	Preaccelerator room
LP	2	Preaccelerator dome and column
LT	1	Tank-1 area from LB 0 to low-energy end of LT 2
LT	2	Tank-2 area from LT 1 to low-energy end of LT 3
•		
LT	9	Tank-9 area from LT 8 to LB 9
LU	0	Utility area (lower level) near preaccelerator room
LU	1	Utility area for tank 1
LU	2	Utility area for tank 2
LU	9	Utility area for tank 9 at end of linac

X CROSS-GALLERY AREA IDENTIFICATION (see drawing 0260-MC-4262)

XE0	Equipment bay (upper level) nearest linac
X E 1	Equipment bay between column lines B and C
XE2	Equipment bay between column lines C and D

XU0	Utility area (lower level) nearest linac
X U 1	Utility area between column lines B and C
х II 2	Utility area between column lines C and D

BOOSTER-AREA IDENTIFIERS (see drawing 0303-MB-2215)

BR 01 Booster Ring

.

BR 24 Booster Ring

BG 01 Booster West Gallery

BG 02 Booster West Gallery

BG20 Booster West Gallery

.

BG 24 Booster West Gallery

BG 11 Booster East Gallery

•

BG17 Booster East Gallery

BY 02 Booster Transformer Yard

BY 11 Booster Transformer Yard

MAIN-ACCELERATOR AREA IDENTIFIERS (see drawings 0404-ME-553 and 0404-MR-1094, 1095)

The first letter "M," of the area designator is used to delineate the Main-Accelerator area. The second letter of the area designator is used to define the superperiod of the Main-Accelerator ring involved.

The third and fourth characters in the typical case are numeric and designate the cell number within the superperiod. The first cell, containing the secondhalf of the long straight section, being 01 as illustrated on drawing 0404-Me-553. Outside the enclosure, within the ring, the service buildings in each superperiod are defined in the third character by the use of a letter "S," followed by a number indicating the number of the building within the superperiod, the numbers increasing in the direction of the beam.

BEAM-TRANSFER AREA IDENTIFIERS (see drawing 0500-MB-6276)

TG1	Beam-Transport Gallery,	adjacent to bottom
TG2	11	upstream center section
TG3	ti .	downstream center section
TG4	11	adjacent to Transfer Gallery
TG5	Beam-Transfer Gallery	columns 9 through 11
TG6	11	columns 7 through 9
TG7	11	columns 5 through 7
TG8	11	columns 3 through 5
TG9	TI .	downstream end to column 3
TE1	Beam-Transport Enclosur	re, adjacent to booster
TE2	TI .	upstream center section
TE3		
	II	downstream center section
TE4	11	downstream center section adjacent to Transfer Gallery
TE4		
	11	adjacent to Transfer Gallery
TE5	11	adjacent to Transfer Gallery columns 9 through 11
TE5	11 11 11	adjacent to Transfer Gallery columns 9 through 11 columns 7 through 9

DEVICE DESIGNATOR

Different section leaders desire to designate devices in different ways. Accordingly, the device designator may be made up in the most flexible manner possible. Space has been left for the entire name of a device if desired. One may, for example, put "Electrostatic Septum" in this space. On the other hand, several sections plan to use three-character codes to designate the device name or primary attribute or function, as follows:

- A for alternators, motors, generators, rotating machinery
- B for beam monitors and stops
- C for controls, computers
- D for
- E for electrostatic
- F for fans, blowers, refrigerating devices
- F for (compressed) gas
- H for hydraulic
- I for ion
- J for
- K for
- L for
- M for magnet
- N for
- O for
- P for power
- Q for energy storage (capacitors and chokes)
- R for radio frequency
- S for
- T for transformer
- U for
- V for vacuum
- W for water
- X for radiation devices and systems
- Y for
- Z for racks, cabinets, cable trays, and ducts

A listing of the device designators assigned to date follows:

AAG A.C. generator

AAM A.C. motor

AMG Motor generator set

APM Pulsed stepping motor

BBD	Beam dump
BIE	Beam intensity monitor, electrostatic
BIF	Beam intensity monitor, Faraday cup
BII	Beam intensity monitor, ion collecting
BIM	Beam intensity monitor, magnetic
BIS	Beam intensity monitor, second emission
BLD	Beam longitudinal oscillation damper
BPD	Beam phase detector
BPE	Beam position monitor, electrostatic
BPF	Beam position monitor, Faraday cup
BPI	Beam position monitor, ion collecting
BPM	Beam position monitor, magnetic
вро	Beam position monitor, straight section
BPR	Beam profile monitor
BPS	Beam position monitor, second emission
BRF	Faraday cup
BRI	Beam profile monitor, ion collecting
BSC	Beam scraper
BSL	Beam scraper lip
BSH	Horizontal defining slit
BSS	Beam safety stop
BSV	Vertical defining slit
BTD	Beam Transverse Oscillation Damper

Beam Transverse Oscillation Damper P.S.

BTS

CC	Control computer
CAD	Computer interface, analog to digital
CBC	Computer interface, binary control
CBS	Computer interface, binary sense
CCB	Control computer booster
CCL	Control computer linac
CCM	Control computer main ring
CCP	Computer card punch
CCR	Computer card reader
CCT	Control computer 8-GeV transfers
CDA	Computer interface, digital to analog
CDK	Computer display, keyboard
CDM	Computer display, memory unit
CDS	Computer display, storage scope
CDT	Computer display CRT
CLP	Computer line printer
CMT	Computer magnetic tape unit
CMX	Multiplex station (module interface rack)
CPT	Computer paper tape unit
CPU	Computer central processing unit
CRM	Computer rotating memory
CSH	Computer interface, sample-and-hold
CSM	Computer interface, stepping motor control
~ = 7 *	

Computer interface, timing generator

CTM

CTY Computer typewriter (Teletype) unit

CVM Computer interface, video select matrix

DBN Debuncher

EI Electrostatic septum

EIS Electrostatic septum power supply

EK Electrostatic kicker

EKS Electrostatic kicker power supply

G Air equipment or gas equipment

GP Air pump, compressor

GT Gas supply tank

GFS Air flow switch

GPR Gas (or air) pressure regulator

GPS Air pressure switch

GVM Air valve, manual

GVP Air valve, relief

GVS Air valve, solenoid operated

I	Ion source equipment
ICC	Instrumentation and control cabinet
IES	Extractor power supply
IFS	Filament power supply
IHV	Ion source Greinacher HV power supply
IMS	Magnet power supply
IPD	Palladium leak
IPS	Palladium leak heater power supply
ISP	Ion source pulser

	U11	1
MA	Momentum analyzing magnet	
MB	Bump magnet	
MC	Correcting magnet	
ME	Sweeping magnet (for emittance meas.)	
MG	Gradient magnet	
MH	Horizontal bending magnet	
MK	Fast kicker magnet	
ML	Pulsed bending magnet	
MP	Pulsed septum magnet	
MQ	Quadrupole magnet	
MS	DC septum magnet	
MT	Trim steering magnet	
MV	Vertical bending magnet	
MY	Switching magnet	
MAS	Power supply for analyzing magnet	
MB1	Main-Accelerator bending magnet, type B1	
MB2	Main-Accelerator bending magnet, type B2	
MBS	Power supply for bump magnet	
MCS	Power supply for correcting magnet	
MD4	Main-Accelerator, 4 ft quadrupole magnet, defocusin	g
MD7	Main-Accelerator, 7 ft quadrupole magnet, defocusing	g
MES	Power supply for sweeping magnet	

Main-Accelerator, 4 ft quadrupole magnet, focusing

Main-Accelerator, 7 ft quadrupole magnet, focusing

MF4

MF7

MHS	Power supply for bending magnet (horizontal)
MKS	Power supply for kicker magnet
MLS	Power supply for pulsed bending magnet
MPS	Power supply for pulsed septum magnet
MQB	Quadrupole magnet base
MQF	Quadrupole magnet, focusing
MQS	Power supply for quadrupole magnet
MQT	Quadrupole magnet, trim
MRD	Booster ring magnet "D"
MRF	Booster ring magnet "F"
MRS	Booster ring magnet power supply
MSR	Ring magnet support
MSS	Power supply for dc septum magnet
MTS	Power supply for trim steering magnet
MVS	Power supply for vertical bending magnet
MYS	Power supply for switching magnet

PD Disconnect

PDP 480 V distribution panel

PLP Lighting panel

PMC Motor control center

POA Power outlet--120 V

POB Power outlet--208 V, 3 phase

POC Power outlet--480 V, 3 phase

PTA Dry transformer

PTO Oil transformer

PTV High voltage power transformer

PUS Unit substation

QCB Capacitor bank

QCH Choke (energy storage)

RAC Accelerating cavity

RAM Anode modulator

RAP Anode power supply

RAT Accelerating cavity tuner

RBU Buncher

RCC RF control center

RDL Dummy load

RDT Drift tube

RFB Ferrite bias power supply

RFC Radio frequency cabinet

RFS Power supply for RF

RFT Ferrite tuner

RLL RF (low level) equipment

RMD Modulator

RMU Module interface rack

ROS Oscillator

RSC RF cavity support

RSL Sampling loop

RPA Power amplifier

VC Vacuum-chamber segment (outside a magnet)

VJ Vacuum joint

VGC Ion gage control unit

VGI Vacuum gage, ionization

VGT Vacuum gage, thermocouple

VPI Vacuum pump, ion

VPM Vacuum pump, mechanical

VPO Vacuum pump, oil diffusion

VPR Vacuum pump, sorption

VPS Ion pump power supply

VPT Vacuum pump, turbo molecular

VPU Vacuum pump, sublimation

VTC Cold finger

VTN Trap, nitrogen

VVA Air-operated vacuum valve

VSV Vacuum sector valve

WD Deionizer

WF Water filter and drinking fountain

WM Water flow monitor

WP Water pump

WS Floor drain

WT Water tank

WFS Water flow switch

WHA Water/air heat exchanger

WHW Water/water heat exchanger

WPR Water pressure regulator

WPS Water pressure switch

WTM Water temperature monitor

WVM Water valve, manual

WVR Water valve, relief

WVS Water valve, solenoid operated

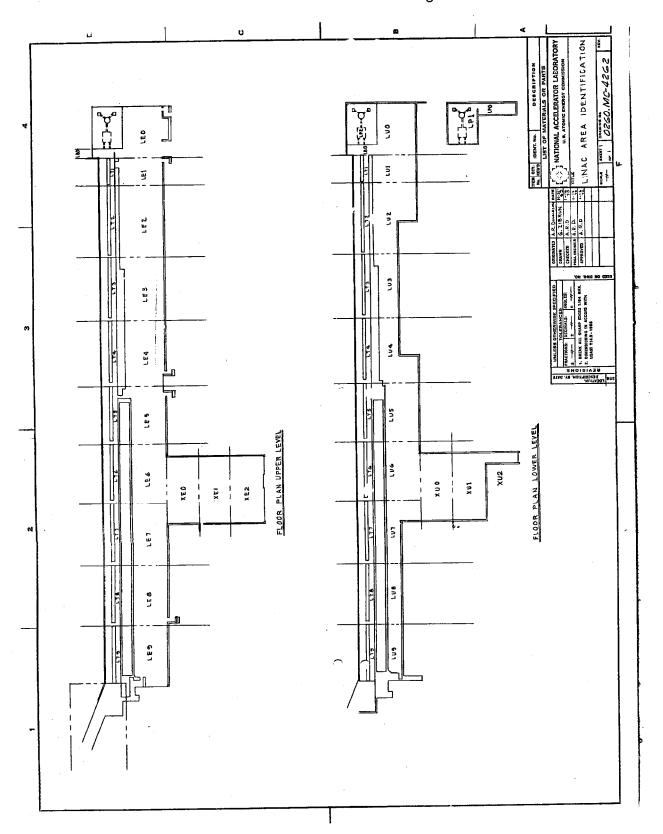
Z Racks, cabinets, cable trays, trenches, and miscellaneous enclosures or containers

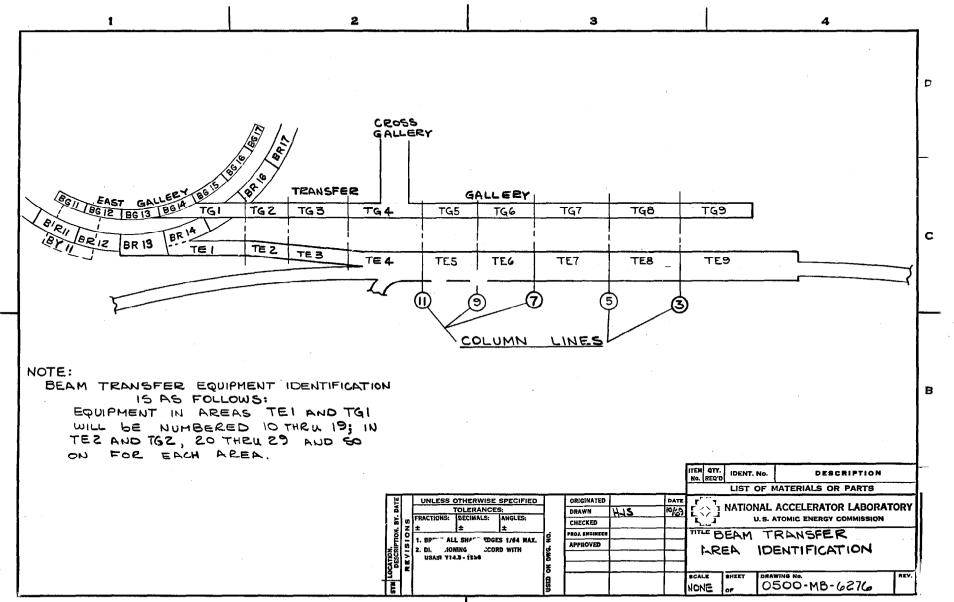
ZCT Cable tray

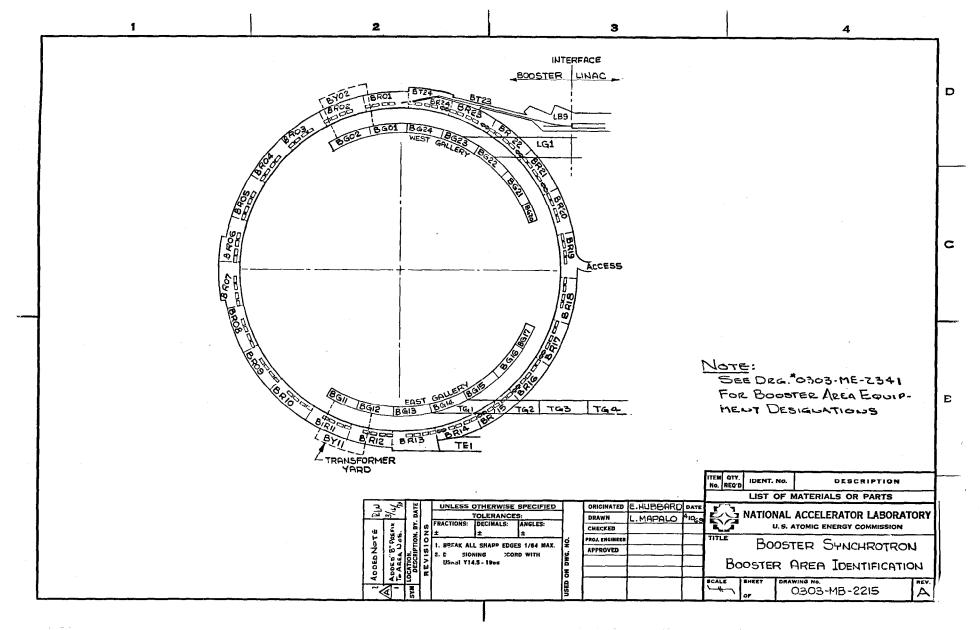
ZRR Relay rack

ZWT Wire trench

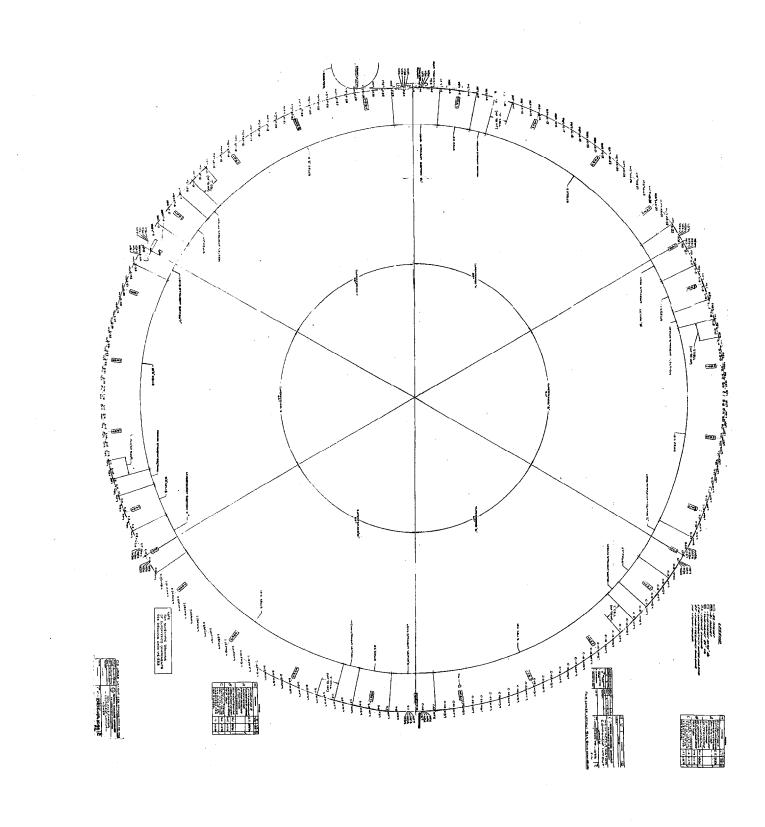
The above listing is certainly incomplete and will be added to by all having equipment in areas requiring identification on drawings, property records, etc. If you need an addition to the listing, we recommend that you attempt to devise a designator for such areas and equipment, consistent with the foregoing. That effort should be communicated to F. T. Cole who will approve the proposal as presented and add it to the listing for use, or suggest an alternative identification symbol. Additions to the listing will be distributed monthly to all holders of the list.







Best Available Figure



Best Available Figure

